Notes from June 22, 1999 DNCT Meeting

Agenda:

1. **Evaluations**
2. **Issues**
3. **Implementation**
4. **Next Game**
5. **Report**

Game 5X – Summary by Dave Fullerton

- In dry years there is a lot of potential benefits and actions in drier years.
- We did not need a lot of facilities.

Fish Evaluations – notes from Monday meeting

- Delta smelt: Focus on comparing to historical salvage and weighting fish and life stages.

Striped Bass: Pete Chadwick

1. Salvaged looked at as an index of vulnerability.
2. Delta outflow also an index factors.
3. Converted salvage to yearling equivalents.
4. Annual averages rather than more detailed evaluation.
5. Salvaged increased significantly over historic.
6. EWA actions had little effect on salvage in relation to base.
7. EWA action made salvage higher in summer months and lower in winter – seasonal tradeoffs.
8. Overall effect of actions were small.
9. Figure 2 – "should be five final" same for below.
10. Outflow – outflows are higher in May under Baseline for games 2 and 4 given Accord. Game 5 a little higher. EWA actions has little effect on May, except in Game 5 which sig increased May outflows. June and July little effect of the Accord and EWA. Overall outflow index improved for May, thus positive effect on striped bass.

Q: entrainment effects on larvae and closure of DCC? Hard to deal with gate closure variable.

C: EWA had an opposite effect in games 4 and 5. R: Averaged over the five years – individual years were a better indicator.

Q: Conclusion? PeteC: salvage data is an indicator that striped bass are more vulnerable to entrainment under todays than historical conditions, and that EWA actions had small effects on striped bass.

C: science on striped bass is in state of flux. Focus on salvage underplays total losses (larvae) – egg and larval benefits are likely high for Accord and EWA.

C: Do analysis for Banks and Tracy mortality using Four Pumps method for converting salvage to mortality – would show benefits of shifting from Banks to Tracy. Relate to annual production estimates.

Pete: doesn't fully understand how salvage numbers and mortality are generated.

C: These numbers hang in mid air.

C: Comfortable with the conclusion that the EWA does not have an effect on striped bass.

C: look at population abundance and densities. Densities show that we have shifted from high densities to low densities.

C: Game 4 used CVP densities and salvage only- making it difficult to make comparisons. Solution: Use CVP triggers but assess total salvage – Russ will run numbers and revise tables. Mike Fris can make adjustments.

Q: Can we also evaluate the Oct Federal Game proposal.

Delta Smelt – Mike Fris

1. Separated to adults and juveniles.
2. Comparing across games not years.
3. Show change and percent change to historic and baseline.
4. Show relative benefits – better to do something when population - angst factor. Base on delta smelt recovery numbers – if pop previous fall is low then weight benefits higher. Ranges from –5 to +5. Also look at distribution – not sure how to do this. Shows different actions have different benefits. Show beneficial actions relative to water costs.

Q: Idea of taking juveniles salvage and divide by summer index, and adult salvage and divide by Fall Mid water trawl index. Weigh salvage index by abundance index.

No conclusion as yet.

Chinook Salmon – Jim White

1. Salmon distribution in time uses salvage data.
2. All salmon runs lumped.
3. Adjusted timings based on salvage occurrence.
4. For evaluation used average occurance – shift temporal distribution of fish in the Delta by reflecting occurrence in the salvage.
5. Earlier end to successful imigration

Q: Have you generated corrected salvage/survival tables?

Q: Angst factor? For winter run yes.

Proposes to use DFG multiple regression model using CWT return data used in Newman Rice model. Also used temperature conditions in river - a refinement is needed – could use Freeport temperatures.

Controversy over assumptions/approach = GEIBEL vs Neuman. Relevance of issue. Relative importance of pumping on Sacramento fish. Russ's migration survival pathways.

Upstream and Delta action benefits to salmon?

Upstream actions are translated to Freeport and Vernalis flows. We should enumerate these factors among historic, baseline, and EWA. Need to look at benefits further upstream where they are more significant locally.

Need to account for upstream operation changes.

VAMP results – absolute survival with river flow but not exports – but no numbers for higher exports. This should be factored into evaluation. What do we assume in the interim. San Joaquin improve survival by 2% by each 1000 cfs. Model shows increased pumping and flow reductions impacts to San Joaquin salmon survival. No data to indicate exports effects SJ salmon survival to Chipps – only flow is a factor.

Two options for exports on SJ salmon – strong effect or not – we can go either way.

Conclusion: have none at this point.

Water Supply – BJ Miller

1. Separated federal and state deliveries. Added 200TAF to federal demands. Art made an adjustment to MWD demands – expect to b e able to take more water in wetter years and less in dry years. MWD also wanted more low salinity water, otherwise they would need even more water. Did this two ways as a result of these features. Art recombined MWD demands with other SWP demands that did not change. Art added 200,000 as did federal demands. Then recombined the state and federal demands to show combined deliveries.
2. End of Stage 1 expected deliveries. For high salinity MWD demands: Average wet 6370, average above normal 6400, below norm 6140, dry 5700, crit.dry 3600 combined deliveries.
3. MWD wants to take more in wetter years and less in drier years. They would use East Side Reservoir to do this.
4. Deliveries/demands need to be broken down by month.

C: New water will have to be developed. EWA could develop water and sell to contractors to meet some of their needs.

C: All could benefit from sharing facilities (storage and conveyance)

Compare to deliveries under the Accord.

Q: How do we put these demands into the next game.

C: These demands are simply used to evaluate the water supply benefits. **Does not affect gaming only evaluation.**

Water Quality - nothing for today

TECHNICAL TEAMS

1. Charge: flushing out hypotheses for things that need evaluation over Stage 1.
2. Could identify analyses to conduct over next six months.
3. Long-Term: WE could id things CMARP should be targeting.
4. Short Term: WE could resolve tech issues such as slope of the lines – GEIBEL approach.
5. Hypotheses that define the underline use of the EWA. Example: reducing salvage losses benefits populations. What are the other top ten basic assumptions.
6. Need to prioritize what we are doing.- address assumptions in dispute and implications for the gaming and for the future.

Worried about implementation issues.

Worried about short term technical issues – starting to work these out.

Discuss why issues are important.. Need to develop positions stated clearly along with rationales. Why there are differences on issues.

Need to do more evaluation work before gaming.

Are the fish densities expected or a mystery.

Benefits of our actions – how much of the patterns can we explain.

Next Meeting
Tuesday

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